



Daniel F. Caruso
Chairman

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@ct.gov

Internet: ct.gov/csc

April 14, 2008

TO: Parties and Intervenors

FROM: S. Derek Phelps, Executive Director

RE: **DOCKET NO. 352** - The Connecticut Light and Power Company application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a proposed substation located at 264 Rood Avenue and 25 Shelley Avenue, Windsor, Connecticut.

As stated at the hearing in Windsor on February 21, 2008, after the Council issues its draft findings of fact, parties and intervenors may identify errors or inconsistencies between the Council's draft findings of fact and the record; however, no new information, evidence, argument, or reply briefs will be considered by the Council.

Parties and Intervenors may file written comments with the Connecticut Siting Council on the Draft Findings of Fact issued on this docket by April 23, 2008.

SDP/cm

Enclosure

192

DOCKET NO. 352 - The Connecticut Light and Power Company application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a proposed substation located at 264 Rood Avenue and 25 Shelley Avenue, Windsor, Connecticut.	}	Connecticut
	}	Siting
	}	Council
	}	April 3, 2008

DRAFT Findings of Fact

Introduction

1. The Connecticut Light and Power Company (CL&P), in accordance with provisions of Connecticut General Statutes Sections 16-50g et seq., and Section 16-50j-1 et seq. of the Regulations of Connecticut State Agencies (RCSA), applied to the Connecticut Siting Council (Council) on November 7, 2007 for the construction, operation, and maintenance of a 60 MVA bulk power substation at 264 Rood Avenue and 25 Shelley Avenue, Windsor, Connecticut. (CL&P 1, Vol. I, p. A-1)
2. The purpose of the proposed facility is to increase the capacity and reliability of the electric power distribution system in Windsor while alleviating load on surrounding substations. (CL&P 1, Vol. I, p. A-1)
3. Pursuant to General Statutes § 16-50m, the Council, after giving due notice thereof, held a public hearing on February 21, 2008, beginning at 3:00 p.m. and continuing at 7:00 p.m. at the Windsor Town Hall, 275 Broad Street, Windsor, Connecticut. (Council's Hearing Notice dated January 22, 2008; Transcript 1 – February 21, 2008 at 3:00 p.m. [Tr. 1], p. 3; Transcript 2 – February 21, 2008 at 7:00 p.m. [Tr. 2], p. 2)
4. The Council and its staff made an inspection of the proposed site on February 21, 2008, beginning at 2:00 p.m. (Council's Hearing Notice dated January 22, 2008)
5. The party in this proceeding is the applicant. (Tr. 1, p. 3)
6. Pursuant to CGS § 16-50l (b), public notice of the application was published in the Hartford Courant on November 2, 2007 and November 5, 2007. (CL&P 1, Vol. I, p. Q 3 & Vol. II, Tab 9)
7. CL&P erected two signs on the property that described the proposed project; one on Rood Avenue and one on Shelley Avenue. Both signs included the Applicant's name, type of facility proposed, the date and location of the public hearing, and contact information of the Applicant and the Council. (Tr. 1, pp. 64-65)
8. Pursuant to CGS § 16-50l (b), notice of the application was provided to all abutting property owners by certified mail. (CL&P 1, Vol. II, Tab 10)
9. Pursuant to CGS § 16-50l (b), CL&P provided notice to all federal, state and local officials and agencies listed therein. (CL&P 1, Vol. II, Tab 8)
10. Pursuant to CGS § 16-50l (a) (2), the project is exempt from the Connecticut Energy Advisory Board (CEAB) request for proposal process. As a courtesy, CL&P notified the CEAB of the project on September 5, 2007. (CL&P 1, Vol. 1, p. R-8)

State Agency Comment

11. Pursuant to CGS § 16-50f, on January 22, 2008, the following State agencies were solicited by the Council to submit written comments regarding the proposed facility: Department of Environmental Protection (DEP), Department of Public Health (DPH), Council on Environmental Quality (CEQ), Department of Public Utility Control (DPUC), Office of Policy and Management (OPM), Department of Economic and Community Development (DECD), and the Department of Transportation (DOT). (Record)
12. The Council received a no comment letter from the DPH on February 8, 2008. (DPH letters dated February 8, 2008)
13. The following agencies did not respond with comment on the application: CEQ, DPUC, OPM, DEP, DOT and DECD. (Record)

Municipal Consultation

14. CL&P representatives began discussing local electric reliability issues with Town officials in 2006. After deciding a new substation was the only viable alternative, CL&P filed location review submissions with the Windsor Inland Wetlands and Watercourses Commission (IWCC) on May 30, 2007, and the Planning and Zoning Commission (P&Z) on June 6, 2007. (CL&P 1, Vol. I, p. O-1)
15. The IWCC and P&Z approved the site plan on June 5, 2007 and June 12, 2007, respectively. (CL&P 1, Vol. I, p. O-1)
16. The Windsor Economic Development Commission voted to support the project at a regularly scheduled meeting on July 18, 2007. (CL&P 1, Vol. I, p. O-2)
17. CL&P conducted public outreach efforts by mailing informational packages to area residents in May 2007 and by conducting a door-to-door outreach to project abutters on June 1, 2007. Eleven of the 28 abutters were home during the door-to-door outreach. For the abutters who were not home, CL&P representatives left an informational package that described the project and notified an upcoming P&Z meeting concerning the project. (CL&P 1, Vol. I, p. R-1; Tr. 1, pp. 58-63)
18. CL&P filed a technical report explaining the proposal to Mr. Donald Trink, Mayor of the Town of Windsor on September 5, 2007. (CL&P 1, Vol. I, p. O-1)
19. The Windsor Town Manager, Peter Souza, submitted a letter in support of the project to CL&P on November 1, 2007. (CL&P 1, Vol. I, p. O-1)
20. Ms. Emily Moon, Assistant Town Manager and Mr. Eric Barz, Town Planner for the Town of Windsor both made limited appearance statements into the record at the February 21, 2008 hearing expressing support for the project. (Tr. 1, pp. 16-17; Tr. 2, pp. 5-6)

Project Need

21. The proposed substation would address the need for additional distribution system capacity and reliability in Windsor by increasing the capacity to deliver electric power from the existing 115-kV transmission system to the local 23-kV distribution system. (CL&P 1, Vol. I, p. A-1)

22. Demand in Windsor has increased approximately 53% from 1981 to 2005. A significant potential for large scale industrial/commercial development exists in the Day Hill Road and Pigeon Hill Road area of Windsor that would further increase demand. In addition, demands on the substations currently serving Windsor are increasing as a result of localized load growth. (CL&P 1, Vol. I, p. G-4; Tr. 1, pp. G-9, G-10)
23. The Town of Windsor's electric load is currently served by four bulk power substations: Bloomfield and North Bloomfield Substations in Bloomfield, Windsor Locks Substation in Windsor Locks, and the Northwest Hartford Substation in Hartford. (CL&P 1, Vol. I, p. G-1)
24. The Bloomfield Substation nearly reached its permissible load rating of 120 MVA in 2006 and was expected to exceed this rating in 2007. To meet the expected need, CL&P instituted a Forced Load Transfer (FLT) scheme where 14 MVA of load was transferred from the substation to the neighboring North Bloomfield and Northwest Hartford Substations, thus increasing available load by 14 MVA. (CL&P 1 Vol. I, p. G-6)
25. The North Bloomfield Substation is projected to exceed its load rating of 79 MVA in 2008. CL&P will install an FLT scheme to increase the load rating by 9 MVA to 88 MVA. (CL&P 1, Vol. I, p. G-6)
26. The two FLT schemes would allow enough capacity to complete construction of the Rood Avenue Substation. Once the substation is complete, peak loads at the Bloomfield Substation would be reduced by 30.8 MVA and would add approximately 56 MVA of new capacity to the distribution system. Further transmission design changes would be implemented to meet future load growth at the North Bloomfield Substation, creating a more reliable, localized distribution system. (CL&P. 1, Vol. I, pp. G-5, G-6; CL&P 4, p. 10)
27. ISO-New England approved a proposed plan that included a 46.7 MVA transformer for the Windsor substation on September 27, 2007. CL&P is awaiting subsequent approval for a 60 MVA transformer at the proposed site. (CL&P 1, Vol. I, p. A-4)
28. A substation for the Windsor area has been listed in the Council's Forecast of Loads and Resources since 2005. (CL&P 1, Vol. I, p. A-4)

System Alternatives

29. CL&P examined alternatives to constructing a new substation at the proposed site to meet growing demand but determined these alternatives would not produce a reliable or flexible long-term solution to meet demand needs. (CL&P 1, Vol. I, pp. G-7 - G-9, I-6)
30. Replacement of the three existing transformers at the Bloomfield Substation as a solution was rejected due to the low net capacity increase associated with the project. A single transformer at the proposed substation would provide more net capacity than the three new transformers. (CL&P 1, Vol. I, p. G-7)
31. CL&P examined the feasibility of expanding the Windsor Locks Substation by adding a third transformer to add 45 MVA of new capacity to the distribution system. This proposal is not cost effective and is estimated at \$20,000,000. The substation would have to be relocated to accommodate the expansion and the installation of new circuits would be difficult due to the already constrained circuit arrangement in the area. (CL&P 1, Vol. I, p. G-8)

32. CL&P considered expanding the existing 27.6-kV system supplied by the Windsor Locks Substation. This included improvements to the North Bloomfield Substation, construction of a new substation (Tobacco Substation - *location unknown*) and installation of two new circuits to the new substation. The new distribution network would add 45 MVA to the system at a cost of \$15,000,000. CL&P rejected this option since CL&P intends to phase out the non-standard 27.6-kV system. (CL&P 1, Vol. I, p. G-8)
33. Installing a new 23-kV substation at the Tobacco site would be cost prohibitive due to the lack of a 115-kV transmission line in the immediate area. (CL&P 1, Vol. I, p. G-9)
34. The Northwest Hartford and proposed Northeast Hartford Substations are too far south of the Windsor area to provide long-term load relief for both the Bloomfield and North Bloomfield Substations. In addition to extensive modifications to the substations, costly upgrades to the existing distribution network would be required. (CL&P 1, Vol. I, pp. G-9, G-10)
35. CL&P contacted several customers in the Windsor area to encourage their participation in the Connecticut Department of Public Utility Control's (DPUC) grant program to install on-site generation. Two distributed generation projects in the Windsor area, representing 3.9 MW, were recently approved by the DPUC. CL&P believes these projects represent the best opportunities for distributed generation in the Windsor area. No additional projects of significance are expected. (CL&P 1, Vol. I, p. I-7; CL&P 4, p. 16)

Site Alternatives

36. CL&P investigated eight potential locations along the existing transmission line right-of-way in south Windsor and selected the proposed site as most preferable. The seven rejected locations and the reasons for their rejection are as follows:
 - a. Park Avenue – site would require longer distribution feeders, additional right-of-way purchases, and significant land clearing. Additionally, interconnecting line access is blocked by residences.
 - b. Washington Road – no suitable land identified. Residential area. Wetland constraints.
 - c. Matianuck Avenue – no suitable land identified. Residential area.
 - d. South of Rood Avenue – wetland constraints and insufficient buffer to residential area.
 - e. Windsor Avenue – insufficient buffer to residential area. Development would require acquisition of church parking lot.
 - f. Deerfield Road – no vacant land available. Area surrounded by residences and wetlands.
 - g. Midian Avenue – potential site constrained by active railroad and wetlands/floodplain. Long distribution feeders and expansion of the right-of-way would be required. Minimal buffer to residential area to north.

(CL&P 1, Vol. I, pp. I-2 – I-5)

Description of Proposed Project

37. The proposed substation would be located on two contiguous properties; 264 Rood Avenue and 25 Shelley Avenue. The properties are 11.09 and 8.97 acres in size, respectively, and total 21.03 acres (refer to Figure 1). (CL&P 1, Vol. I, p. H-1)
38. The properties, owned by CL&P, are zoned for agriculture. CL&P also owns two adjacent residentially zoned parcels at 15 Shelley Avenue (0.29 acres) and 258 Rood Avenue (0.68 acres). 15 Shelley Avenue

is improved with a single family residence that CL&P intends to put on the market once construction is complete. (CL&P 1, Vol. I, p. H-1; Tr. 1, p. 28)

39. The site is bounded by twenty-five abutting parcels, most of which of developed with single-family residences. (CL&P 1, Vol. I, pp. H-3, H-4)
40. The nearest residence is 250 feet north of the proposed substation, located at 190 Sunnyfield Drive. (CL&P 1, Vol. I, p. H-4)
41. The property has been used as an overhead/distribution line corridor since the 1950's. An electrical substation operated on the site from 1965 to 1991. The transformer was removed in 1991 as the need for different voltages to area customers changed. Presently, the site contains 115-kV and 345-kV transmission lines, 23-kV distribution lines and a 23-kV switching station (former substation site). (CL&P 1, Vol. I, pp. A-4, F-1; Tr. 1, p. 44)
42. One 115-kV circuit, #1751, traverses the site on three wood pole structures that are approximately 47 feet above grade. A second 115-kV circuit, #1779, traverses the site on three monopole structures. A 345-kV circuit, #395, is also mounted on the monopole structures. The highest monopole structure on the property is approximately 110 feet above grade. (CL&P 1, Vol. I, pp. F-1, H-3; Tr. 1, p. 19)
43. The existing switchyard is located adjacent to the north property line and is served by a dirt access road originating from Rood Avenue. (CL&P 1, Vol. I, p. H-2)
44. The remaining areas of the property consist of undeveloped woodland. Six wetlands are scattered through the property, one of which abuts the existing switchyard to the north. (CL&P 1, Vol. I, pp. H-2, H-3; Vol. II, Site Plan C-5)
45. The proposed substation would be located in the north-central portion of the parcel, east of and adjacent to the existing right-of-way and switchyard access road. (CL&P 1, Vol. I, pp. K-2, K-3)
46. The substation would be located in a 220-foot by 137-foot area enclosed by a seven-foot high chain link fence with one additional foot of barbed wire. CL&P would establish a trap-rock surface within the compound. A locked gate would be installed across the driveway entrance. (CL&P 1, Vol. I, pp. F-1, K-3, K-4)
47. Substation equipment would include one 60 MVA power transformer, a switchgear enclosure, three 115-kV circuit switchers, one 115-kV circuit breaker, two 115-kV disconnect switches, a 48-foot by 14-foot relay and control enclosure, and a 24-foot by 14-foot battery enclosure. The substation would be sized to accommodate two additional 60-MVA transformers if needed for future load growth. (CL&P 1, Vol. I, p. F-3)
48. Switchgear equipment would be installed within a 27-foot long by 14-foot wide by 14-foot high metal-clad switchgear enclosure. The switchgear would contain four 23-kV feeder positions, three of which would be activated initially. (CL&P 1, Vol. I, p. F-3)
49. The distribution feeders would exit the substation via underground conduits, connecting to existing overhead distribution lines on the property. (CL&P 1, Vol. I, p. F-3)
50. The proposed substation would be supplied from the existing #1751 115-kV transmission circuit. (CL&P 1, Vol. I, p. F-1)

51. The #1751 transmission line would loop through the proposed substation where a 115-kV circuit breaker would be installed to separate the circuit into two circuits. (CL&P 1, Vol. I, p. F-3)
52. Two new transmission structures would be installed adjacent to the substation to facilitate the loop-through design, structures numbered 10142A and 10143A. Each structure would consist of three wood poles approximately 47 feet above grade. A third structure, #10143, would be relocated 70 feet to the west. (CL&P 1, Vol. I, p. F-3; Tr. 1, p. 20)
53. The reconfigured #1751 circuit would pass under the existing #395 and #1779 circuits to the line terminal structures located within the substation. The terminal structures would be approximately 55 feet in height. (CL&P 1, Vol. I, p. F-3; Tr. 1, p. 20)
54. The existing site access road would be re-graded where necessary, widened and resurfaced with gravel. A parking area would be created adjacent to the substation entrance. An access gate and bituminous concrete apron would be installed at the access road entrance on Rood Avenue. (CL&P 1, Vol. I, p. K-4)
55. The construction phase of the project is expected to take approximately 10 to 12 months with a tentative in service date of June 2009. (CL&P 1, Vol. I, p. N-1)
56. The nominal service life of the substation equipment is 40 years. (CL&P 1, Vol. I, p. N-1)
57. The estimated cost for the siting, design, and construction of the proposed substation and supporting infrastructure is \$13,800,000. (CL&P 1, Vol. I, p. F-5)

Environmental Considerations

58. The proposed project would have no effect on archeological resources. (CL&P 1, Vol. II, Tab 7)
59. Approximately 50,000 square feet of woodland would be removed to accommodate construction, including 35,000 square feet for the substation footprint and 15,000 square feet for a minimum 20-foot wide construction zone surrounding the substation footprint. (CL&P 1, Vol. I, p. K-6; CL&P 3, Q. 1)
60. Approximately 46 trees six inches or greater in diameter would be removed for the project. (CL&P 6, p. 11)
61. Site clearing may extend 60 feet north of the substation to accommodate site grading. (CL&P 1, Vol. II, Tab 1; Tr. 1, pp. 21-22)
62. Six wetlands were identified on-site, three of which would be impacted by construction activities. The impacted wetlands are identified as Wetland 1, Wetland 3 and Wetland 4 (refer to Figure 2). (CL&P 1, Vol. I, p. K-4; Tr. 1, p. 23)
63. Wetland 1 consists of 1.4 acres and is mostly located under and adjacent to the existing transmission line right-of-way. Wetland impacts would include the removal of three existing wood transmission poles, installation of three new wood transmission poles, and the re-routing of existing transmission lines. Construction activities would result in 40 square feet of permanent impacts and 3,708 square feet of temporary impacts. (CL&P 1, Vol. I, p. K-6; Vol. II, Tab 1)

64. Areas temporarily disturbed by construction would be restored with native vegetation, as appropriate. The permanent impacts to Wetland 1 would be minor and would not affect wetland function or value. (CL&P 1, Vol. I, p. K-5)
65. Wetland 3 occurs in the central portion of the property, extending from an area east of the existing access drive towards Shelley Drive. The wooded wetland is 0.8-acres in size and was historically filled and farmed. The early successional forest within the wetland is dominated by red maple, red oak, apple, arrow wood, and silky dogwood. (CL&P 1, Vol. I, p. H-7)
66. The east side of the substation footprint would extend into Wetland 3 resulting in 490 square feet of permanent impacts and 575 square feet of temporary impacts. These impacts would be minor given that the wetland has been degraded from previous filling and disturbance. (CL&P 1, Vol. I, pp. K-5, K-6; Tr. 1, pp. 32-33)
67. Wetland 4 is a wooded wetland located southeast of the proposed substation. CL&P intends to clear approximately 1,000 square feet of woodland from the wetland to provide clearance for construction activities. Temporary impacts such as construction vehicles entering the area would be avoided to the greatest extent possible. (Tr. 1, pp. 23, 58)
68. CL&P identified a population of pink lady's slipper (*Cypripedium acaule*) adjacent to Wetland 4 and within the construction footprint. At the town's request, CL&P would relocate the population to a suitable area east of the substation and along the edge of Wetland 4. The pink lady slipper is not a state threatened, endangered, or special concern species. (CL&P 1, Vol. II, Tab 1; CL&P 3, Q. 6; Tr. 1, p. 25)
69. CL&P intends to enhance the wooded buffer to Wetlands 1, 3 and 4 by planting native species that presently occur in the area. (CL&P 1, Vol. II, Tab 1; Tr. 1, p. 24)
70. CL&P plans to restore a previously disturbed wetland adjacent to the existing switchyard that once connected Wetland 1 and 2. (CL&P 1, Vol. II, Tab 1; Tr. 1, p. 18)
71. Construction of the site would not affect any state endangered, or threatened, or species of special concern. (CL&P 1, Vol. I, p. K-7)
72. The project would not have an adverse affect on wildlife or habitat values. The property serves mainly as a wildlife corridor and construction of the substation would temporarily affect this function. The property would maintain most of its original habitat characteristics after construction. (CL&P 1, Vol. I, pp. K-6, K-7; CL&P 6, p. 12)
73. The site is not located within a 100-year flood zone. (CL&P 1, Vol. I, p. K-11)
74. The transformer would feature a secondary containment system, consisting of an underlying and surrounding polyvinyl-lined sump capable of holding 110 percent of the transformer's oil capacity, to capture any accidental release of transformer oil. (CL&P 1, Vol. 1, p. K-8, CL&P, 6, p. 11)
75. Noise levels from substation operations would increase by 0.2 dBA as a result of substation operations and would not be perceptible from existing background noise. Noise levels would remain below state regulations and the Town's Noise Control Ordinance. (CL&P 1, Vol. I, p. K-10; CL&P 6, p. 9; Tr. 1, p. 52)

Visibility

76. The site is located in the center of the parcel, setback from Rood Avenue and neighboring residences. A natural wooded buffer exists on the north, south and east sides of the parcel. (CL&P 1, Vol. I, pp. K-2, L-2)
77. Approximately three abutting residences to the north would have seasonal views of the substation. CL&P proposes to plant vegetative screening in the area of the existing switchyard and in the lightly wooded area north of the substation. (Tr. 1, pp. 18-19, 21-23, 28)
78. Abutting residences to the west would have views of the substation due to the lack of mature trees in this area. Vegetation in the right-of-way is maintained in a shrub-like state to provide clearance to the existing transmission lines that traverse the property. CL&P may be able to plant vegetative screening along the right-of-way where the #1751 line is interrupted and looped through the substation. (CL&P 1, Vol. I, p. K-2)

Magnetic Field Levels

79. There are no state or federal limits for magnetic fields at the property line for a substation. The Institute of Electrical and Electronic Engineers has issued a guideline limit for long-term public exposure to magnetic fields of 9,040 milliGauss (mG). The International Commission on Non-Ionizing Radiation Protection has issued a guideline limit for long-term public exposure of 833 mG. (CL&P, Vol. I, p. M-13)
80. The existing transmission and distribution lines on the property produce magnetic fields. To determine how the magnetic field from these lines would be altered by the proposed substation, CL&P performed pre- and post-construction magnetic field calculations based on ISO New England's 2014 peak-load day line currents. Both the transmission lines and distribution lines cross Rood Avenue and Matianuck Avenue. (CL&P 1, Vol. I, pp. M-2, M-8; CL&P 3, Q. 11)
81. The interconnection of the substation would primarily affect current flows on the #1751 transmission line. Using the 2014 peak-hour line currents, magnetic fields at the nearest abutting residence to the line, 288 Rood Avenue, are projected to increase from 17.3 mG to 19.6 mG as a result of current changes associated with the operation of the substation. The residence is approximately 75 feet from the line. (CL&P 1, Vol. I, p. 71; CL&P 3, Q. 11)
82. Magnetic fields from the transmission lines at all other abutting residences on Rood Avenue, Shelley Avenue, Hope Circle, Matianuck Avenue and Sunnyfield Drive would not change significantly from operation of the substation. (CL&P 3, Q. 11)
83. The projected magnetic fields where the transmission lines crosses Rood Avenue would increase from 57.7 mG to 65 mG. (CL&P 1, Vol. I, p. M-8)
84. The projected magnetic fields where the transmission lines cross Matianuck Avenue would decrease from 53.2 mG to 41.7 mG. (CL&P 1, Vol. I, pp. M-8, M-9)
85. Magnetic fields from the distribution lines would also be affected by substation operations. Magnetic fields where the distribution lines cross Matianuck Avenue would decrease from 40 mG to less than 10 mG due to decreased load. Magnetic fields where the distribution lines cross Rood Avenue would increase from 26 mG to 41 mG due to increased load. (CL&P 1, Vol. I, p. M-10)

86. Magnetic fields along the west property line would decrease from 17 mG to 8 mG due to the reconfigured #1751 transmission line. (CL&P 1, Vol. I, p. M-10)
87. Magnetic fields along the north property lines would decrease from 18 mG to 15 mG due to the reduced current on the distribution line in this area. (CL&P 1, Vol. I, p. M-10)
88. Magnetic field levels east and west of the transmission and distribution lines would be lower than levels beneath the lines. Magnetic field levels would reach background levels (3-4mG) approximately 200 feet from the center of the outermost circuit. (Council Admin Notice 1; CL&P 1, Vol. I, p. M-10)
89. Magnetic fields produced from substation equipment would be negligible since the equipment is over 140 feet from the nearest property line. (CL&P 1, Vol. I, p. M-7)

Safety and Reliability

90. Construction of the proposed substation would be performed in full compliance with the standards of the National Electrical Safety Code. (CL&P 1, Vol. I, p. J-1)
91. In the event of equipment failure, protective relaying equipment would remove the equipment from service, thereby protecting the public and other equipment within the substation. (CL&P 1, Vol. I, p. J-1)
92. Reliability would be improved by utilizing a loop though design, transformer protection devices and redundant automatic protective relaying equipment. Protective relaying equipment would provide automatic detection of abnormal conditions. When an abnormal condition occurs, a protective trip signal would be sent to the respective circuit breaker(s) to isolate faulted equipment. CL&P plans to install redundant protective relaying schemes with continuous monitoring. (CL&P 1, Vol. I, p. J-1)
93. The substation would be remotely controlled and monitored using digital metering systems and a Supervisory Control and Data Acquisition system. (CL&P 1, Vol. I, p. J-1)
94. Appropriate signage would be posted at the substation to alert the public of a high voltage facility. (CL&P 1, Vol. I, p. M-14)

Figure 2
Site Layout

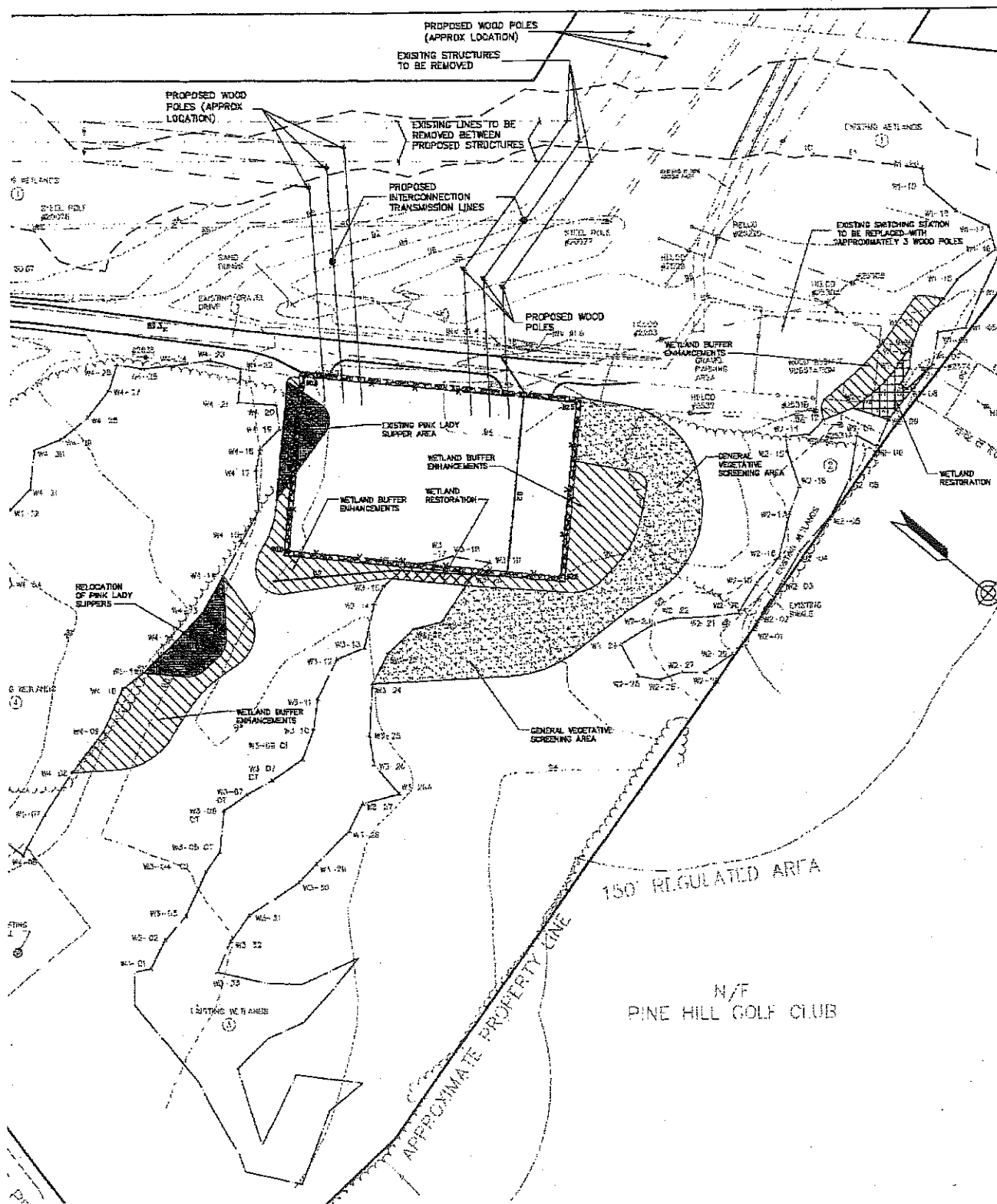


Figure 1
Site Location



(CL&P 1, Vol. II, Tab 5)

